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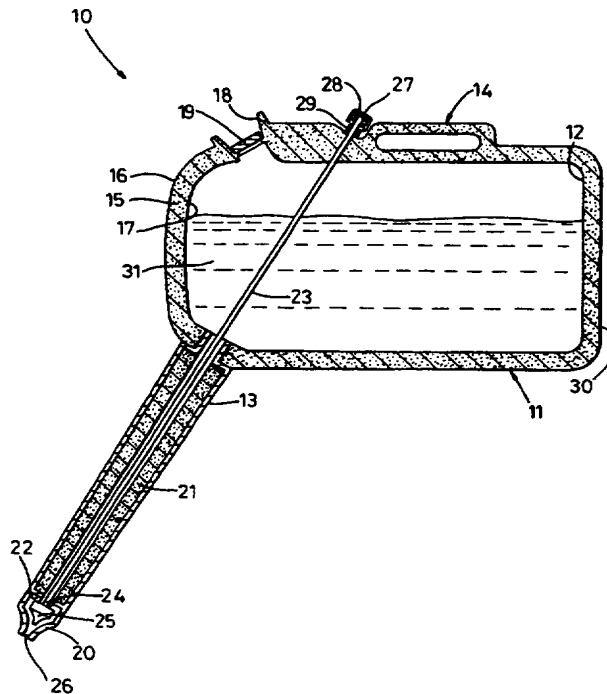
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**(54) Weed killing apparatus**

(57) Weed killing apparatus 10 comprises a body 11 which defines an insulated reservoir 12 (optionally formed as a dual density moulding), a carrying handle 14 and a remotely actuatable valve 25 that can release liquid from the reservoir 12 through a spout 13 (which may also be insulated) so that spurts of hot water can be targeted at weeds to kill them. The means 27/28 to actuate the valve 25 may be located adjacent to the handle 14, thus enabling the hand grasping the handle 14 to also actuate the valve 25. The valve 25 may be sited in the nozzle end 26 of the spout 13, being mounted on a rod 23 extending up the spout to the actuating means 27/28. Axial movement of the rod 23, as a result of manual actuation of means 27/28, enables the flow of water, while a spring 29 urges the valve 25 closed.

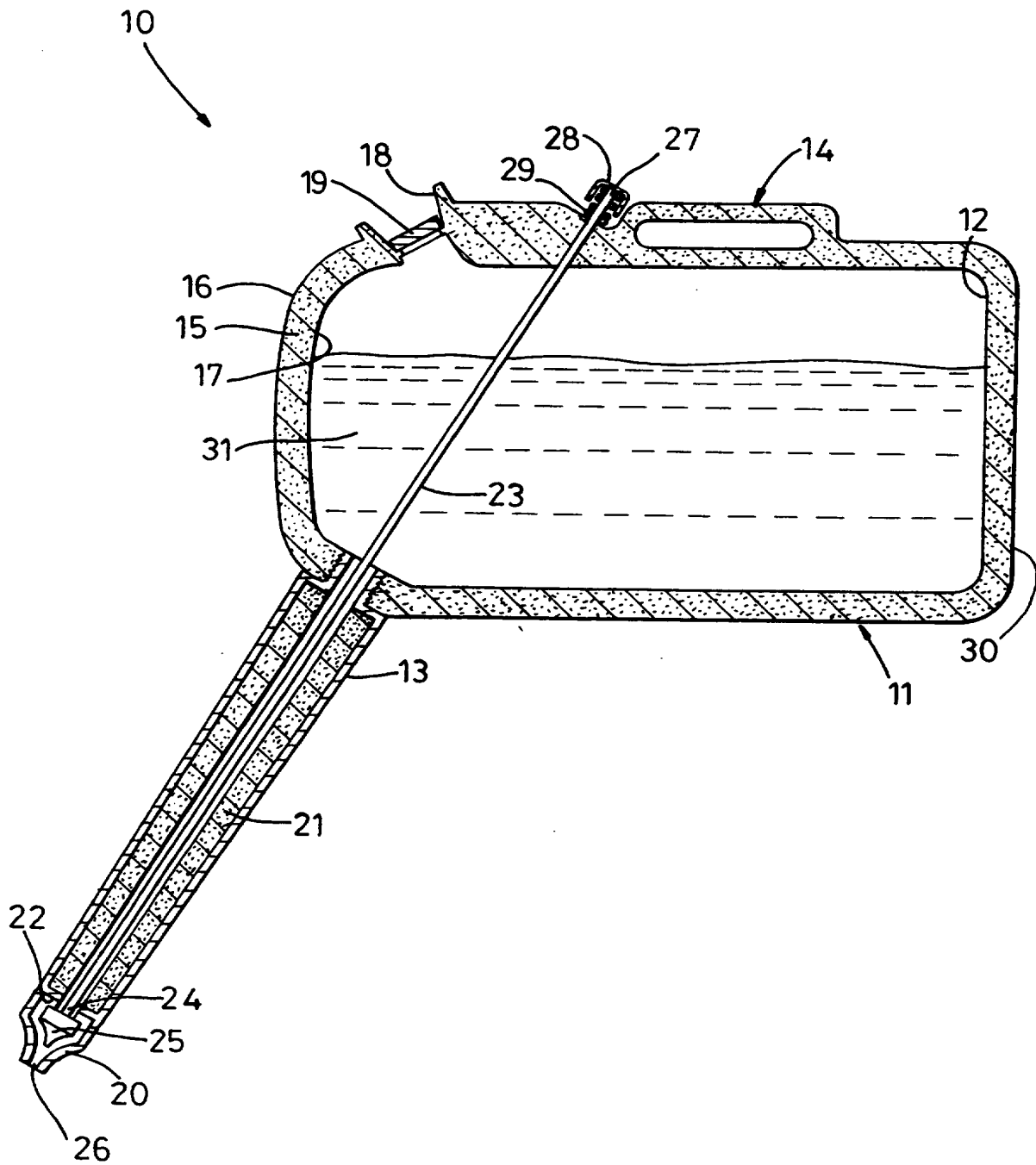


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995

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Weed Killing Apparatus

This invention to weed killing apparatus.

Although many people are becoming increasingly reluctant to use weed killing chemicals to destroy their weeds, even in such areas as paths and patios, they still wish to have a method of killing those weeds other than pulling them up. It has been known for some time that weeds can be killed by applying hot water, but it can be extremely difficult to deliver hot water on to the weeds in any safe or controlled manner.

The present invention consists in weed killing apparatus comprising an insulated body defining a reservoir for receiving hot water and having a carrying handle, a spout for extending downwardly when the reservoir is supported by the carrying handle and remotely actuatable valve means for allowing hot water to be released from the reservoir, through the spout, on to the weed.

Preferably the valve means includes actuation means located adjacent the carrying handle and in a particularly preferred embodiment the actuation means and handle are relatively mutually disposed such that the actuation means can be actuated by a part of the hand which is grasping the handle. Most conveniently this operation would be carried out by the Users' thumb.

The spout may be elongate and may have a nozzle at its lower end. In this case the valve means may include a valve body located in the nozzle for engaging a seat in the

spout to close the spout. The valve body may be mounted on a rod which may extend through the spout to the actuation means, in which case axial movement of the rod, in one direction, may move the valve body away from the seat for  
5 allowing hot water to flow through the nozzle. Preferably, the apparatus includes resilient means acting either directly or indirectly on the rod or valve body to urge the valve body against the seat. The actuation means may be in the form of a button fixed to the end of the rod.

10 The spout may be insulated along at least part of its length. Additionally or alternatively, the body and/or spout may be formed as a dual density moulding with high density inner and outer skins and a low density intermediate portion.

15 In any of the above arrangements, the reservoir may have a flat face on it which can be stood with the spout elevated, when the apparatus is not in use.

Although the invention has been defined above, it is to be understood it includes any inventive combination of the  
20 features set out above, or in the following description.

The invention may be performed in various ways, and a specific embodiment will now be described, with reference to the accompanying drawing, which is a cross-sectional view through a weed killing apparatus.

25 A weed killing apparatus is generally indicated at 10 and comprises a body 11, which defines an inner reservoir 12, and an elongate spout 13. The body 11 includes a carrying handle 14 so that it can be carried with the spout

13 extending downwardly and also away from the User. The body 11 is insulated and, in the illustrated embodiment, has insulation 15 between inner and outer skins 16, 17. The body 11 can conveniently be formed as a dual density moulding. The body 11 also defines an inlet 18, into which  
5 boiled water can be poured. The filler cap 19 is provided to close the inlet 18.

The spout 13 is also insulated along most of its length and is formed with a nozzle 20 at its remote end. The end  
10 of the insulated portion 21 defines a valve seat 22. A rod 23 extends along the length of the spout 13, across the reservoir 12 and out through the body 11 to terminate adjacent the handle 14. The end 24 of the rod 23 which is located in the nozzle 20 carries a rubber sealing washer or  
15 head 25 which can engage against the seat 22 to prevent water flowing into the nozzle 20 and hence out of its outlet 26. The other end 27 of the rod 23 has a button 28 fixed thereto. A spring 29 is located around the end 27 to act between the body 11 and the underneath of the button 28 so  
20 as to pull the rod in a direction which causes the washer 25 to engage seat 22 so that the valve formed by the washer 25 and seat 22 is normally closed. If the button 28 is depressed, against the action of the spring 29, the valve opens and water can flow from the reservoir 12 down the  
25 spout 13 and out of the outlet 26 in a well-directed stream.

The body 11 has a flat face 30 so that the apparatus 10 can be stood on its face 30 for storage and for filling.

In use, the reservoir 12 is filled with boiled water 31

through the inlet 18 and the filler cap 19 is engaged in the inlet 18. The User then grasps the handle 14 and carries the apparatus 10 to the area in which weeds are to be treated. He then points the nozzle 20 at a target weed and  
5 depresses the button 28 causing the valve to open and a jet of boiled water to be shot on to the weed. As soon as the button 28 is released the valve closes and the User then moves on to the next weed.

The apparatus therefore allows for discrete, accurate,  
10 environmentally friendly destruction of weeds. Because the apparatus is well insulated the water stays hot for a reasonable period of time and the User is protected against burns. Further, the dimensions and arrangement of the spout are such that hot water is kept well away from the  
15 User. In this respect the reservoir is typically large enough to contain between 3 and 5 litres, and the spout may have a length of approximately 45 cms. It may be desirable to use salted water and in this case it is particularly desirable that all surfaces which are exposed to the water  
20 are inert; for example, they may be of plastics material.

Claims

1. Weedkilling apparatus comprising an insulated body defining a reservoir for receiving hot water and having a carrying handle, for extending downwardly when the reservoir is supported by the carrying handle and remotely actuatable valve means for allowing hot water to be released from the reservoir, through the spout onto the weed.

2. Apparatus as claimed in claim 1 wherein the valve means includes activation means located adjacent the carrying handle.

3. Apparatus as claimed in claim 2 wherein the actuation means and handle are relatively mutually disposed such that the actuation means can be actuated by part of the hand which is grasping the body.

4. Apparatus as claimed in any one of the preceding claims wherein the spout is elongate and has a nozzle at its lower end.

5. Apparatus as claimed in claim 4 wherein the valve means includes a valve body located in the nozzle for engaging a seat in the spout.

6. Apparatus as claimed in claim 5 wherein the valve body is mounted on a rod extending up the spout to the actuation means.

7. Apparatus as claimed in claim 6 wherein axial movement of the rod, in one direction, moves the valve body away from the seat for allowing hot water flow through the nozzle.

8. Apparatus as claimed in claim 7 wherein the rod or valve body are sprung loaded to urge the valve body against the seat.

5 9. Apparatus as claimed in any one of the preceding claims wherein the spout is insulated along at least part of its length.

10. Apparatus as claimed in any one of the preceding claims wherein the body is formed as a dual density moulding.

10 11. Apparatus as claimed in any one of the preceding claims wherein the reservoir has a flat face on which it can be stood with the spout elevated when not in use.

15 12. Weedkilling apparatus substantially as herein before described with reference to the accompanying drawings.





Application No: GB 9520687.6  
Claims searched: 1-12

Examiner: Matthew Lawson  
Date of search: 31 January 1997

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A4A (AK, ASX); B8D (DCD, DCE, DCF8, DCG, DCW9, DCW21);  
B8T (TEDV, TWG, TWH, TWQ, TWR, TWX)

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47/24

Other: Online: WPI

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
Y	GB 2250734 A (BONE) final paragraph of page 3, first two paragraphs of page 4 and the figures.	4-8
Y	GB 1029018 (HAVEG INDUSTRIES INC) page 1 lines 55-70, page 4 lines 29-31.	10
Y	FR 2669184 A1 (EXEL GSA) figures 1, 4 and 5.	4-8
X,Y	US 4648535 (ZIMMERMANN) valve means 9 with remote activation means 38 and figures 1, 2 & 5.	X:1-3,11 Y:4-8,10

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.  
& Member of the same patent family

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.

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